

**Report**  
**on**  
**Activities Implemented, Lessons Learnt and Recommendations**  
**concerning**  
**UNEP Institutional Strengthening Project 1-Day Workshop**  
**for**  
**Practitioners in the RAC Industry**  
**on**

- **Introduction to Natural Refrigerants and their Properties.**
- **Natural Refrigerant Cooling Systems.**
- **Proper Maintenance and Servicing Practices**

**held**  
**June 23, 2023 at the Marriott Hotel**  
**by**  
**Earle Wilson, PhD - Trainer**

## **Introduction:**

Report on the workshop held for practitioners in the Refrigeration and Air Conditioning (RAC) sector on June 23, 2023, at the Courtyard by Marriott Hotel, New Kingston.

## **Background**

Jamaica, being a Signatory to the Montreal Protocol on Substances that Deplete the Ozone Layer is obligated to phase out all ozone-depleting substances (ODS) controlled under the Protocol.

In executing this mandate and recognizing that the refrigeration and air-conditioning sector (RAC) is the largest consumer of these substances, Jamaica seeks to provide technological support to the RAC service industry by developing the capacity of this sector to transition from the use of Hydrochlorofluorocarbons (HCFCs) to alternatives, particularly natural refrigerants.

## **ACTIVITIES IMPLEMENTED**

### **Morning Session (9 am – 12 noon)**

- Introduction and Welcome
- Pre-course quiz /assessment
- Impacts of Montreal and Kyoto Protocols on the RAC Industry
- Introduction of Natural Refrigerants and their Properties
- Natural Refrigerant Cooling Systems

### **Lunch (12 noon - 1:30 pm)**

### **Afternoon Session (1:30 pm – 5 pm)**

- RAC Practical-Refrigerant Identification
- Proper Maintenance and Servicing Practices
- Post-course quiz/assessment

### **Adjournment**

## **The Participants**

Most of the participants were from the supply and services areas of the industry. The majority showed a willingness to participate in further training. They all indicated the need to have updated equipment to navigate the changes occurring in the industry.

## **Lessons Learned**

The following are general lessons learnt from conducting the workshop:

- Workshops such as this help to spread the news of the phase-out of HCFCs by 2030 in Jamaica. Too many practitioners are unaware of this issue
- Long-term storage of recovered HCFCs is of concern to the practitioners
- The need for the right Equipment to handle New and Emerging refrigerants is of concern
- Evaluation of each workshop is a worthwhile exercise to pursue
- Participants welcome the practical exercise

## **Recommendations**

The following are recommendations to assist the objectives of the HPMP:

- The proposed Island-Wide Recovery & Storage system for HCFCs needs to be implemented ASAP.
- The delivery of Equipment to aid RAC practitioners needs to be fast-tracked.
- More practical exercises with updated Equipment should be encouraged at all workshops.

# APPENDICES

## Appendix 1: REGISTER



National Environment and Planning Agency

UNITED NATIONS ENVIRONMENT PROGRAMME INSTITUTIONAL STRENGTHENING PROJECT (PHASE X)



Natural Refrigerants Training Workshop

Attendance Register

Venue: Courtyard Marriott Hotel, 1 Park Close, Kingston 5



Date: 29 June 2023

#	NAME	ORGANIZATION	EMAIL ADDRESS	TELEPHONE NUMBER	SIGNATURE
1.	KEITH FEUDISON	COORIBBSON CONSULTANTS	THFEUD@74HSS.COM	(876) 504 3672	[Signature]
2.	Andy - Anne Johnson	Green world & 6. 24.	andyljohnson17@gmail.com	(876) 564-7544	[Signature]
3.	Kevin Yeung	MBS AIRPORT	kevin.yeung@mba.mt	876 206 8799	[Signature]
4.	Anthony John	SECF ENERGY	TELLY454@gmail.com	876 4682755	[Signature]
5.	Matthew Finckin	Goldman Refrigeration Limited	mfinckin@goldj.com	876 784 9022	[Signature]
6.	Sulian Duren	Geoble Refrigeration	jduren@geble.com	876-392 7414	[Signature]
7.	Michael Monte	Geoble Refrigeration Ltd	mmonte@geble.com	876-548-5944	[Signature]
8.	Marcon Miller	Self employed	mlmiller@nepa.gov.jm	876-6034010	[Signature]
9.	VIVAN BLAKE	NEPA	vblake@nepa.gov.jm	(876) 351-1812	[Signature]

Venue: Courtyard Marriott Hotel, 1 Park Close, Kingston 5

audience register

Date: 23 June 2023

	NAME	ORGANIZATION	Email Address	Telephone Number	Signature
10.	Andre Edwards	NEPA	andre.edwards@nepa.gov.jm	816-754-7540	Anders
11.	Songye Neuman	NEPA	Songye.Neuman@nepa.gov.jm	816-754-2440	
12.	Patricia Hamilton	NEPA	Patricia.hamilton@nepa.gov.jm	876-754-7400	P. Hamilton
13.	Joni Brown	CAC 2000 LTD	jbrown@cac2000ltd.com	(876) 656-9200	
14.	Gimme Shackles	High Tech Air (International) High Tech 2023 Jamaica	jgarden@cac2000ltd.com	876 787-4434	
15.	Jason Gardner	CAC 2000 LTD	jsgarden@cac2000ltd.com	876-895-0227	J. Gardner
16.	Fork Miller	UTech	emil@utech.com	876-342-4944	
17.	Shaneke Richards		shaneke@yahu.com	816536 8152	S. Richards
18.					
19.					

<b>APPENDIX 2: Pre and Post Tests Results</b>						
	<b>Names</b>	<b>Company Name</b>	<b>Contact</b>	<b>E-Mail</b>	<b>Pre Test</b>	<b>Post Test</b>
1	Marlon Miller	Self-Employed	803-4010	millermarian51@gmail.com	<b>2/12</b>	<b>3/12</b>
2	Gianne Shackleford	High Tech AC Ltd	787-4434	hightech2023@hotmail.com	<b>7/12</b>	<b>3/12</b>
3	Jason Gardner	CAC2000 Ltd	895-0227	jgardener@cac2000ltd.com	<b>5/12</b>	<b>4/12</b>
4	Michael Mantle	Geddes Refrigeration Ltd	548-5944	mmantle@grlja.com	<b>5/12</b>	<b>6/12</b>
5	Andre Edwards	NEPA	754-7540	andre.edwards@nepa.gov.jm	-	-
6	Jenoi Brown	CAC2000 Ltd	656-9200	jwilson@cac2000ltd.com	<b>11/12</b>	<b>11/12</b>
7	Petricia Hamilton	NEPA	481-3776	pretriciahamilton@nepa.gov. jm	-	-
8	Anthony Telfa	Wisynco	468-2753	tellyy45@gmail.com	<b>5/12</b>	<b>7/12</b>
9	Julian Burey	Geddes Refrigeration Ltd	322-7414	jburey@grlja.com	<b>6/12</b>	<b>8/12</b>
10	Matthew Finnikin	Geddes Refrigeration Ltd	923-6822	mfinnikin@grlja.com	<b>6/12</b>	<b>9/12</b>
11	Kevin Young	MBJ @ Sangster International Airport	206-8799	kevinyoungjp@gmail.com	<b>4/12</b>	<b>10/12</b>
12	Trudy-Ann Johnson	Denn Dock Ltd	564-7544	trudyjohnson17@yahoo.com	<b>1/12</b>	<b>9/12</b>
13	Keith Fendison	Caribbean Boilers	504-3672	keithfendi@yahoo.com	<b>3/12</b>	<b>8/12</b>